



EZ - Ride Suspension

Part # 24955
2000 — 2004 Ford Super Duty
4" Suspension system

Part #	Description	Qty.
24955-01	Front track bar relocation bracket	1
70201	Pitman arm	1
5U-230SR	9/16" x 3" x 10" semi-round u-bolts	4
916NW	Hardware bag	1
5U-3817R	5/8" x 3 5/8" x 17' round u-bolt	4
58NW	Hardware bag	1
PB6071	Front bump stop extension	2
BL5504	5 1/2" rear lifted blocks	2
28952-02	Front sway bar support brackets	2
FCB-10	Rear carrier bearing shims	3
24955NB	Hardware bag	1
24955INST	Instruction sheet (installer copy)	1
24955INST	Instruction sheet (customer copy)	1
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1
DECAL	Window sticker	1

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

Make sure to use thread locker or locktite on all new and stock hardware associated with the installation of this suspension system.

It is the responsibility of the installers to make sure that the rear view mirror hanger is hung from the rear view mirror. The rear view mirror hanger has instructions on proper post installation procedure.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

Installation manual 4" Suspension system 2000 — 2004 Ford Super Duty Part # 24955

sj030206rev.01

Important customer information

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

It is the responsibility of the customer or the mechanic to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

LIMITED LIFETIME WARRANTY

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental or consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

Important information that needs to be read before installation begins;

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

New longer front and rear shocks are needed after this suspension system has been installed and the front and rear shocks need to be ordered as a separate part #. If you have not already ordered your front and rear shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front and rear shocks.

Ford Motor Company has once again made a change to their front track bar for the Super Duty 4WD truck and Excursion. Ford Super Duty 4WD trucks and Excursions have had problem with the stock track bar on these vehicles breaking off in the STOCK form. We know of at least 3 different changes to this part since the first vehicles in 1998. The most recent change that has been made to the front track bar is that they have reduced the diameter of the bar from 1" to $\frac{3}{4}$ ". By doing this, Tuff Country feels that this is weakening a very important part of the vehicle and could cause serious damage if an after market lifted suspension system is installed.

Before any Tuff Country parts are installed on the vehicle listed above, it is highly recommended that a visual inspection be done on the vehicle to make sure that the vehicle does not have the $\frac{3}{4}$ " diameter stock track bar. If the vehicle that you are working on does have the $\frac{3}{4}$ " diameter stock track bar and you still want to install any Tuff Country parts, you must order Part # 20950 from your local Tuff Country Suspension dealer. Part # 20950 is an after market 1" diameter track bar. If any Tuff Country parts are installed on a vehicle with a $\frac{3}{4}$ " track bar, Tuff Country claims no liability nor does Tuff Country's warranty apply to any vehicle that is lifted with the $\frac{3}{4}$ " diameter track bar. Thanks you for you attention to this issue. If you have any further questions and/or concerns, please feel free to contact Tuff Country EZ-Ride Suspension

Hardware bag 24955NB includes:

Description	Quantity
1/2" x 1 1/2" bolt	2
1/2" x 2" bolt	2
7/16" USS flat washer	8
1/2" unitorque nuts	4
3/8" unitorque nut	2
5/16" USS flat washer	2

Special note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Please follow instructions carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-installation measurements:

Driver side front: _____
Passenger side front: _____
Driver side rear: _____
Passenger side rear: _____

At the end of the installation, take the same measurements and compare to the pre-installation measurements.

Post-installation measurements:

Driver side front: _____
Passenger side front: _____
Driver side rear: _____
Passenger side rear: _____

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with jack stands. Place a jack stand on both the driver and passenger side. Next, remove the stock wheels and tires from both sides.

2. Place a pair of hydraulic floor jacks under the front axle. Place one on the driver side and one on the passenger side. Raise up on both hydraulic floor jacks at the same time until they come in contact with the front axle.

3. Working on the driver side, remove the stock shock from the stock upper and lower mounting points and save the stock hardware for later re-installation. The stock shocks may be discarded. **Special note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-**

Ride Suspension recommends using a 26" fully extended nitrogen gas shocks. Repeat procedure on passenger side.

4. Working on the driver side, remove the stock hardware that connects the stock brake line bracket to the stock frame rail. Save the stock hardware for later re-installation. Repeat procedure on the passenger side.

5. Working on the driver side, remove the stock sway bar end link from the stock location on the stock sway bar and the stock frame mount. Save the stock hardware and end link for later re-installation. Repeat procedure on the passenger side.

6. Working on the driver side, remove the (2) stock bolts that connect the stock sway bar to the lower u-bolt mount. Save the stock hardware for later re-installation. Repeat procedure on the passenger side. Set the stock sway bar a side for later re-installation.

7. Working on the driver side, remove the stock castle nut and cotter pin that connects the stock pitman arm to the stock drag link. Save the stock castle nut and cotter pin for later re-installation. Carefully break the taper on the stock drag link and stock pitman. **Special note: Take special care not to rip or tear the dust boot on the stock drag link.** Next, remove the stock nut and washers that connect the stock pitman arm to the stock sector shaft. Using a pitman arm puller, carefully remove the stock pitman arm from the sector shaft on the stock steering box. A new pitman arm is needed, the stock pitman arm may be discarded.

8. Working on the driver side of the vehicle, remove the stock track bar from the stock track bar bracket. Save the stock hardware for later re-installation.

9. Working on the driver side, remove the stock track bar bracket from the stock location. Save the stock hardware for later re-installation. **Special note: Do not use any air tools when working with the 3 stock bolts that hold the stock track bar bracket to the frame and cross member. Also, if need be, carefully heat up the (2) stock bolts that hold the stock track bar bracket to the stock frame location. This will help melt the thread locker or lock tite that is on the stock bolts.** Remove and discard the stock track bar bracket.

10. Working on the driver side, remove the stock u-bolts from the stock location. The stock u-bolts, high nuts and washer may be discarded. Place the stock upper and lower u-bolt plates a side for later re-installation. Repeat procedure on the passenger side. **Special note: The lower u-bolt plate on the passenger side is welded to the front axle.**

11. Carefully lower down on both hydraulic floor jacks at the same time, allowing enough room so that the stock front springs can be removed and the new front springs

can be installed. **Special note: Take special care not to bend or over extend any brake lines.**

12. Working on the driver side, remove the stock spring from the stock location. Save the stock mounting hardware. The stock spring may be discarded. Repeat procedure on the passenger side.

13. Working on the driver side, loosen but do not remove the upper bolt that connects the stock spring shackle to the stock frame. Repeat procedure on the passenger side.

14. Locate the stock spring hardware that was removed in step # 12. Working on the driver side, install the new front springs into the stock location and secure using the stock hardware. **Make sure to use thread locker or lock tite.** Torque the front spring eye bolt to **140 ft lbs.** **Special note: The upper and lower shackle bolts should be torqued with the weight of the vehicle on the ground.** Repeat procedure on the passenger side.

15. Carefully raise up on both hydraulic floor jacks at the same time until the stock axle seats properly with the newly installed front spring.

16. Locate (4) new 9/16" x 3" x 10" semi round u-bolts, (8) new 9/16" u-bolt high nuts, (8) new 9/16" u-bolt washers, and the stock upper and lower u-bolt plates that were removed in step # 10. Working on the driver side, secure the newly installed front spring assembly to the stock front axle using the new 9/16" x 3" x 10" semi round u-bolts, high nuts, washers, upper u-bolt plate and lower u-bolt plate. Torque the new u-bolts to **110 ft lbs.** Repeat procedure on the passenger side.

17. Locate the new pitman, the stock pitman arm hardware, the stock castle nut and the stock cotter pin that was removed form step # 7. Install the new pitman arm to the sector shaft located on the stock steering box, secure using the stock hardware. **Make sure to use thread locker or lock tite.** Torque to **185 ft lbs.** Next, install the stock drag link to the newly installed pitman arm and secure using the stock hardware. Make sure to install the stock cotter pin.

18. Locate the new upper driver side track bar relocation bracket and the stock hardware that was removed from step # 9. Install the new upper driver side track bar relocation bracket to the stock location on the bottom side of the stock frame rail and secure using the stock hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.** Next, secure the ear of the new track bar relocation bracket to the back side of the stock cross member and secure using the stock hardware. **Make sure to use thread locker or lock tite.** **Special note: The stock track bar relocation bracket was installed towards the front of the stock cross member, the new track bar relocation bracket is going to be installed towards the rear of the stock**

cross member. Torque the stock bolt to the stock cross member to **80 ft lbs.** Torque the stock bolts that hold the new track bar relocation bracket to the bottom side of the stock frame to **68 ft lbs.** **Special note: Do not use any air tools when working with the (3) stock bolts that hold the new track bar bracket into the new location.** If air tools are used the stock hardware may strip. **Make sure to use locktite.**

19. Locate the stock track bar hardware that was removed in step # 8. Install the stock track bar to the previously installed track bar relocation bracket and secure using the stock hardware. Make sure to use thread locker or lock tite and torque to 135 ft lbs. **Special note: You may have to install the stock track bar to the newly installed track bar bracket with the weight of the vehicle on the ground.**

20. Locate the new front performance bump stops. Locate (2) 5/16" USS flat washers and (2) 3/8" unitorque nuts from hardware 24955NB. Working on the driver side, install the new performance bump stop into the stock location above the stock front axle and secure using the new hardware. Make sure to use thread lock or lock tite and torque to **22 ft lbs.** Repeat procedure on the passenger side.

21. Working on the driver side, remove the stock sway bar mounting bracket that is bolted to the inside of the stock frame rail. Invert the stock sway bar mounting bracket and re-install to the bottom side of the stock frame rail using the stock hardware. Make sure to use thread locker or lock tite and torque to **22 ft lbs.** Repeat procedure on the passenger side.

22. Locate the new driver and passenger side sway bar kicker support bracket. Locate (2) 1/2" x 1 1/2" bolts, (4) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag 24955NB. Working on the driver side, install the new sway bar kicker support bracket to the stock location on the stock frame rail and secure using the new 1/2" x 1 1/2" bolt and hardware. **Special note: Do not tighten at this point and make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

23. Locate the stock sway bar end links and stock hardware that was removed in step # 5. Working on the driver side, install the stock sway bar to the newly installed stock sway bar bracket and kicker support bracket. Secure using the stock hardware. **Special note: Do not tighten at this point and make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

24. Locate the stock sway bar and the stock sway bar mounting hardware that connects the stock sway bar to the stock front axle. Working on the driver side, install the stock sway bar to the stock axle location and secure using the stock hardware. Make sure to use thread locker

or lock tite and torque to **22 ft lbs.** Repeat procedure on the passenger side.

25. Locate the stock sway bar end link mounting hardware that connects the stock sway bar to the stock sway bar end link that was removed in the step # 5. Working on the driver side, install the stock sway bar end link to the stock sway bar and secure using the stock hardware. **Special note: Make sure to use thread locker or lock tite and torque to 65 ft lbs.** Move back to the upper mounting hardware that connects the stock sway bar to the stock sway bar bracket and torque to **65 ft lbs.** Also at this time, torque the 1/2" x 1 1/2" bolt and hardware that connects the kicker support bracket to the stock frame rail to **75 ft lbs.** Repeat procedure on the passenger side. **Special note: You may have to install the stock sway bar end links to the stock sway bar with the weight of the vehicle on the ground.**

26. Locate the stock brake line bracket hardware that was removed in step # 4. Working on the driver side, install the stock brake line bracket into the stock location and secure using the stock hardware. **Special note: Make sure to use thread locker or lock tite and torque to 14 ft lbs.** Repeat procedure on the passenger side. Working on the driver side, carefully bend down the stock brake line bracket giving enough clearance so that the stock brake lines do not over extend. Repeat procedure on the passenger side.

27. Locate the stock shock mounting hardware that was removed in step # 3. Working on the driver side, install the new shock into the stock upper and lower location and secure using the stock hardware. **Special note: Make sure to use thread locker or lock tite and torque to proper torque specifications.** Repeat procedure on the passenger side. **Special note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 26" fully extended nitrogen gas shocks.**

28. Carefully remove the hydraulic floor jacks from under the front axle. Install the tires and wheels and carefully lower the vehicle to the ground.

29. If you were not able to install the stock track bar into the newly installed track bar bracket in step # 19, perform this step now that the weight of the vehicle is on the ground.

30. If you were not able to install the stock sway bar end links to the stock sway bar in step # 25, perform this step now that the weight of the vehicle is on the ground.

31. Check and double check to make sure that all steps were performed properly.

Front end installation complete

Rear end installation

32. To begin installation, block the front tires of the vehicle so that the vehicle is stable and can't roll forward. Safely lift the rear of the vehicle and support the frame with jack stands. Place a jack stand on both the driver and passenger side. Next, remove the stock wheels and tires from both sides.

33. Place two hydraulic floor jacks under the rear axle. Place one on the driver side and one on the passenger side. Raise up on both hydraulic floor jacks at the same time until they come in contact with the rear axle.

34. Working on the driver side, remove the stock shock from the stock upper and lower mounting locations and save the stock hardware for later re-installation. Longer shocks are needed, so the stock shocks may be discarded. **Special note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 30" fully extended nitrogen gas shocks.** Repeat procedure on passenger side.

35. Remove the stock brake line bracket that mounts to the stock rear differential. Save the stock hardware for later re-installation.

36. Working on the driver side, remove the stock u-bolts from the stock location. The stock u-bolts and hardware may be discarded. Set the stock upper u-bolt plate a side for later re-installation. **Special note: If the vehicle that you are working on has a stock rear contact over load, set the stock contact over load a side for later re-installation.** Repeat procedure on the passenger side.

37. Carefully lower down on both hydraulic floor jacks at the same time allowing enough room for the new blocks to be installed. **Special note: Make sure not to over extended any brake lines or hoses when lowering the rear axle.**

38. Locate the (2) new rear lifted blocks. Working on the driver side, install the new rear lifted block between the stock axle and the stock spring assembly. Repeat procedure on the passenger side. Carefully raise up on both hydraulic floor jacks at the same time until the new block seats properly with the stock spring assembly. **Special note: The new block does not have a taper to it so it does not matter which way that the block is installed.**

39. Locate (4) new 5/8" x 3 5/8" x 17" round u-bolts, (8) new 5/8" u-bolt high nuts, (8) new 5/8" u-bolt washers and the stock upper u-bolt plates that were removed from step # 36. Working on the driver side, install the stock upper u-bolt plate into the stock location. Install the new u-bolts into the stock location and secure using the new

hardware. Torque to **130 ft lbs.** Repeat procedure on the passenger side. **Special note: If the vehicle that you are working on is equipped with stock over loads, make sure to re-install them back into the stock location before installing the new u-bolts.**

40. Locate the new shocks and the stock shock hardware that was removed from step # 34. **Special note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 30" fully extended nitrogen gas shocks.** Working on the driver side, install the new shock into the stock location and secure using the stock hardware. Torque to **75 ft lbs.** Repeat procedure on the passenger side.

41. Locate the stock brake line bracket hardware that was removed in step # 35 and secure the stock brake line bracket into the stock location using the stock hardware. Carefully bend down the stock brake line bracket giving enough clearance so that the stock brake line does not over extend.

42. Carefully remove both hydraulic floor jacks from under the vehicle.

If the vehicle that you are working on has a 2 piece rear driver shaft, please follow steps 43 — 45

If the vehicle that you are working on does not have a 2 piece rear drive shaft, please skip to step # 46

43. Place a hydraulic floor jack under the stock rear drive line next to the stock carrier bearing drop bracket.

44. Remove the stock hardware that connects the stock carrier bearing to the stock carrier bearing drop bracket. The stock hardware may be discarded.

45. Locate (3) rear carrier bearing shims. Locate (2) 1/2" x 2" bolts, (4) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag 24955NB. Install the new rear carrier bearing shims between the stock carrier bearing and the stock carrier bearing drop bracket. Secure using the new 1/2" x 2" bolt and hardware. Make sure to use thread locker or lock tite and torque to **75 ft lbs.** Remove the hydraulic floor jack from under the stock rear drive line.

46. Check and double check to make sure that all steps were preformed properly. Check and double check to make sure that all stock and new hardware is torque to proper torque specifications. **Special note: Refer to the owners manual and the torque setting sheet.**

47. Install the tires and wheels and carefully lower the vehicle to the ground.

Congratulations, installation complete.

Take the vehicle directly to an alignment shop for a proper front end alignment.

Any questions on the front or rear end installation, please contact Tuff Country EZ-Ride Suspension.

Torque Settings

5/16"	15 — 18 ft lbs.
3/8"	28 — 32 ft lbs.
7/16"	30 — 35 ft lbs.
1/2"	65 — 85 ft lbs.
9/16"	85 — 120 ft lbs.
5/8"	95 — 130 ft lbs.
3/4"	100 — 140 ft lbs.